

WHAT IS CLAIMED IS:

1 1. An inventory planning method, comprising planning a safety stock
2 level to cover uncertainty in demand over an exposure period with a desired service
3 level based at least in part upon product availability from a spot market.

1 2. The method of claim 1, wherein safety stock level planning comprises:
2 estimating a maximum safety stock level of the product to cover uncertainty
3 in demand over the exposure period with the desired service level based upon
4 product availability from a non-spot market supply; and
5 estimating an optimal safety stock level by reducing the maximum safety
6 stock level based upon product availability from a spot market supply.

1 3. The method of claim 2, wherein the maximum safety stock level
2 estimation is based in part upon an estimation of lead time for obtaining the product
3 from the non-spot market supply.

1 4. The method of claim 3, wherein the maximum safety stock level
2 estimation is based in part upon an estimation of lead time uncertainty for obtaining
3 the product from the non-spot market supply.

1 5. The method of claim 2, wherein the maximum safety stock level
2 estimation is based in part upon an estimation of demand for the product.

1 6. The method of claim 5, wherein the maximum safety stock level
2 estimation is based in part upon an estimation of demand uncertainty for the
3 product.

1 7. The method of claim 2, wherein the optimal safety stock level
2 estimation is based in part upon a cost of obtaining the product from the spot
3 market.

1 8. The method of claim 2, wherein reducing the maximum safety stock
2 level comprises estimating a total cost of covering the maximum safety stock level

3 with a combination of product received from the spot market and product received
4 from the non-spot market supply.

1 9. The method of claim 8, wherein the total cost is estimated based in part
2 upon an estimation of the expected amount of spot market product needed to cover
3 uncertainty in demand over the exposure period with the desired service level for a
4 given amount of non-spot market product.

1 10. The method of claim 9, wherein the total cost is estimated based in part
2 upon a cost of obtaining the product from the spot market.

1 11. The method of claim 9, wherein the total cost is estimated based in part
2 upon a cost of obtaining the product from the non-spot market supply.

1 12. The method of claim 8, wherein estimating the optimal safety stock
2 level comprises minimizing the estimated total cost.

1 13. The method of claim 12, wherein the optimal safety stock level
2 corresponds to a safety stock level that minimizes the estimated total cost.

1 14. The method of claim 2, wherein the optimal safety stock level is
2 estimated based at least in part upon a stochastic simulation of one or more random
3 variables.

1 15. The method of claim 2, further comprising ordering the optimal safety
2 stock level from the non-spot market supply.

1 16. The method of claim 2, further comprising ordering from the spot
2 market supply a product level needed to meet actual demand above the optimal
3 safety stock level and within the desired service level.

1 17. The method of claim 16, wherein ordering from the spot market
2 comprises navigating a web site providing information relating to the spot market.

1 18. The method of claim 1, wherein planning the safety stock level
2 comprises navigating a web site providing information relating to use of the spot
3 market to plan an inventory level.

1 19. The method of claim 18, wherein planning the safety stock level
2 comprises providing to an inventory planning engine accessible through the web site
3 information relating to product demand and information relating to non-spot market
4 lead time.

1 20. The method of claim 1, further comprising performing enterprise
2 resource planning based upon the planned safety stock level.

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